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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/752,886	12/28/2000	David Wallman	SUN1P287/P4990	9423

22434 7590 08/05/2003

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EXAMINER

FILIPCZYK, MARCIN R

ART UNIT	PAPER NUMBER
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2171

DATE MAILED: 08/05/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

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# Office Action Summary

Application No.

09/752,886

Applicant(s)

WALLMAN, DAVID

Examiner

Marc R Filipczyk

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-- The MAILING DATE of this communication appears in the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE \_\_\_\_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 05 June 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 July 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

***Response to Amendment***

This action is responsive to Applicant's response filed on June 5, 2002 (paper # 7).

Claims 1-28 are presented for further examination.

***Claim Rejections - 35 USC § 112***

***1<sup>st</sup> Paragraph***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-18 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Regarding claim 1, the claimed subject matter, "method of executing a method" was not described in the specification or figures in such a way to enable one skilled in the art to which it pertains to make or use the invention.

Regarding claims 2-15 and 19-28 depend from claim 1 and therefore inherit the deficiencies of that claim.

Regarding claims 16-18 contain same subject matter as claim 1 and therefore are rejected on the same ground as claim 1.

Appropriate explanation is required.

***Claim Rejections - 35 USC § 112***

***2<sup>nd</sup> Paragraph***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, claim consists of multiple loops of methods that are not identified appropriately. The segment, "the data structure" is indefinite. Is only one data structure implemented? Last paragraph of amended claim 1, "when the address of the obtained next source code is not in the data structure", where is the obtained next source code obtained from? Examiner suggests if working with multiple data structures to label and keep track of all components that pertain to it.

Regarding claims 2-15 and 19-28 depend from claim 1 and therefore inherit the deficiencies of that claim.

Regarding claims 16-18 contain same subject matter as claim 1 and therefore are rejected on the same ground as claim 1.

Appropriate explanation is required.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). For applications filed on or after November 29, 1999, this rejection might also be overcome by showing that the subject matter of the reference and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person. See MPEP § 706.02(l)(1) and § 706.02(l)(2).

Claims 1-28 are rejected under 35 U.S.C. 103(a) as best as the Examiner is able to ascertain as being obvious over Pradhan et al (U.S. Patent No. 6,446,257) in view of Agesen et al. (U.S. Patent No. 6,253,215).

Regarding claims 1 and 16-18, Pradhan discloses a method and system of executing a method to enable memory associated with objects not referenced external to the executed method to be reclaimed upon completion of execution of the executed method, comprising: (garbage collecting, fig.1, items 102, 106, 108, Pradhan)

obtaining a data structure including one or more addresses of source code that creates objects; (see col. 8, lines 2-4 and fig. 2, 202, 220, Pradhan)

obtaining next source code in the source code of the method; (see col. 8, lines 2-4 and fig. 2, 202, 220, Pradhan)

determining whether an address of the obtained next source code is in the data structure; and (fig. 2, 214 and 220, Pradhan)

when the address of the obtained next source code is in the data structure including one or more addresses of source code that creates objects, (fig. 2, 206) creating an object on a heap of memory (col. 9, lines 26-30) using the source code associated with the address such that objects are stored in memory (fig. 2, 106 and 216, Pradhan).

Pradhan further discloses fig. 2, object (202), program (210), instructions (212) offset and address (214 and 220), heap (216), and internal external pointers (206 and 208) in memory (106) containing all the necessary elements to store two heaps for local and non-local objects but does not expressly teach that embodiment. However, it is the Examiner's assessment that it was a common object programming practice at the time the invention was made to store local and non-local variables in separate data structures. In fact, it is inconvenient to store local and non-local variables in the same data structure. Further to demonstrate Examiner's view, Agesen discloses a system for facilitating resource management for applications (title, Agesen) in which garbage

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collection is performed (fig. 8, 820, Agesen) wherein local objects (variables) are managed with a heap and non-local objects (variables) are held in a distinct data structure. Hence, one of ordinary skill in the art would have been motivated to combine Pradhan and Agesen references and derive with local and non-local heaps in Pradhan system because of the similar use of pointers in both prior arts, wherein Agesen specifically refers to pointers as local and global (variable) object references (col. 11, lines 37-40, Agesen).

Regarding remaining claims 2-15 and 19-28 are dependent from claim 1, contain similar subject matter and therefore are rejected on the same basis.

#### ***Response to Arguments***

Applicant's arguments filed on June 5, 2003 have been fully considered but they are not persuasive. The arguments and responses are listed below.

Applicant argues on page 9 of the 6/5/03 response that, "There is only one data structure recited in the claims. The next code is obtained from the source code of the method."

Examiner disagrees. If the "next code" is obtained from the source code of the method, where is the "next code" located (prior to and after it's obtained)? Further, claim 1, lines 10 and 15 refer to the "address" of the next source code being (line 10) and not being (line 15) in the data structure. There seem to be several data structures in use, however they are not defined nor acknowledged in the claims.

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Applicant argues on page 9 of the 6/5/03 response that, “the method claimed in claim 1 is one that executes a method, which is a term well-known in the art of software programming. There is only one method that is claimed.”

Examiner disagrees. Claim 1, line 1 recites, a method of executing a method. Examiner does not understand the meaning of a method executing a method. Method alone or in combination with another method needs to be initiated by some process or action. Applicant states that only one method is claimed. However, that is not what is written in the claim. Both methods must be defined in the claim or the claim has to be rewritten if the applicant wishes to maintain that, “There is only one method that is claimed.”

Applicant argues on page 10 of the 6/5/02 response that, “In no manner does Pradhan disclose or suggest storing local and non-local objects in separate heaps.” Also, “In fact, Pradhan discloses that a heap may be divided into two or more groups segregated by age, where groups are referred to as generations.”

Examiner disagrees. Applicant admits that Pradhan discloses that a heap may be divided into groups segregated by age (col. 9, lines 36-40), however, the Applicant fails to notice the similarity between the claimed invention and the prior art (Pradhan). Segregating a heap is equivalent to having separate heaps in the same memory, further, Pradhan uses internal and



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external pointers for object allocation and accessing (fig. 2), thus Pradhan clearly suggests using two heaps for local and non-local objects.

Applicant argues on page 10 of the 6/5/02 response that Agesen appears to store the objects referred to by the local and global variables in the heap, rather than separately stored.

Examiner disagrees. Agesen discloses local variables that point to objects in the heap are managed in the stack whereas global variables which also may include references to objects in the heap are managed outside the stack, see col. 6, lines 27-32,. Clearly they are separately stored. Furthermore, the Examiner points out that the Applicant cannot show non-obviousness by attacking references individually, where, as indicated above, rejections are based on combination of references. In re Killar, 209USPQ 871 (CCPA 1981).

With response to all the pending claims 1-28, Examiner respectfully traverses Applicant's assertion based on the discussion cited above, as such, Examiner maintains the same rejections.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after

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the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc R Filipczyk whose telephone number is 703-305-7156. The examiner can normally be reached on Mon-Fri, 8am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Safet Metjahic can be reached on 703-308-1436. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-7239 for regular communications and 703-746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

MF  
July 24, 2003

  
SAFET METJAHIC  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER